



## Minutes of Meeting


Date: 1.08.08

**Herschel**

Doc.-No.: HP-2-ASED-MN-1593

Meeting place:	ESTEC NL	Chairman:	B. Collaudin
Date/Time:	1.08.08 / 10-00 hrs	Secretary	A. Koppe
Agenda dated:	Standard Agenda	Close of Meeting:	1.08.08/ hrs

Subject: PTR for Herschel IST SPIRE Commissioning

Participants:  K. Goodey ESA J. Huesler ESA B. Collaudin TASF A. Koppe ASED <i>A. Koppe</i> D. Hendry ASED S. Sidher RAL (phone) S. Leaks RAL (phone) J. Mooney ASED	Distribution: E. Sawyer RAL C. Scharmberg ESA K. Goodey ESA M. Cesa ESA B. Collaudin TASF S. Idler ASED D. Hendry ASED J. Huesler ESA
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Page: 1 of Page(s) &amp; annex

 Brief-Minutes (except following sheets)

 Summary of Results of Sheets 2 till

Conclusion:



Doc.-No.: HP-2-ASED-MN-1593  
Date: 1.08.08  
Page: 2

Reference	Results	Remarks
	<p><b>PTR Agenda:</b></p> <ul style="list-style-type: none"><li><b>0. Introduction</b></li><li><b>1. Test Identification</b></li><li><b>2. Review of Test Data /ACS / Procedure Variation Sheets</b></li><li><b>3. Test Report</b></li><li><b>4. NCR / RFD Review</b></li><li><b>5. Open Work / Open Actions Identification</b></li><li><b>6. AOB</b></li><li><b>7. Conclusion</b></li></ul>	



Reference	Results	Remarks
	<p><b>0. Introduction</b></p> <p>The objective of this review is assess the results of the Herschel Instruments IST SPIRE Commissioning in He2 which comprised SPIRE CFT, Peak-Up, SPIRE SPT (BSM control loop setting, manual cooler recycling as pre-verification for not filled cryostat).</p> <p>TRR MoM: HP-2-ASED-MN-1588</p> <p><b>1. Test Identification</b></p> <p>Herschel Satellite: CI P100000          SPIRE Instrument: CI112000</p> <p><b>1.1 Integreation/Inspection Status</b></p> <p>S/C Integreation Status Lists: HP-2-ASED-LI-0032 Iss.13</p> <p>Inspections were performed by ASED QA and ESA PA before test, no major findings were reported.</p> <p><b>Actual S/C status &amp; EGSE status</b>          S/C <b>ON</b></p> <p><b>EGSE ON</b></p> <p><b>BS and SAS SCOE ON</b></p>	



Reference	Results	Remarks
	<p>TTC SCOE <b>ON</b></p> <p>TTC SCOE SW <b>ON</b></p> <p>TMTC DFE <b>ON</b></p> <p>ACMS SCOE <b>ON</b></p> <p>Star-tracker SCOE <b>ON</b></p> <p>Cryo SCOE <b>ON</b></p> <p><b>1.2 Cryo Conditions</b></p> <p>He2, 61% filling            No shield cooling            Pumping was throttled</p> <p><b>1.3 Summary of Software Configuration Status:</b></p> <p>No change to OBSW</p> <p>change to sorption cooler script on CCS</p> <p><b>1.4 Configuration changes H/W wrt. TRR:</b></p> <p>None in terms of H/W</p>	



Reference	Results	Remarks
	<p><b>2. Review of Test Data / Reports</b></p> <p><b>2.1 SPIRE</b>            HP-2-ASED-TP-0217 Issue 1.4            HP-2-ASED-TP-0226 Issue 1.1            HP-2-ASED-TP-0204 Issue 1.1            HP-2-ASED-TP-0134 Issue 5            HP-2-ASED-TP-0237 Issue 1</p> <p>PVS#1 covers the test sequence of TP-226, TP-217, TP-204.</p> <p><b>Session ID:</b></p> <p>2008_07_30_00_38_hercdmu_hpws22_REALTIME_SPIRE_COM</p> <p><b>Session Tag:</b></p> <p>TP_0217_iss1_4_TP-226_iss1_1_SPIRE_Commissioning_He2_END_001</p> <p>As run procedure is available</p> <p><b>2.1.1 PVS</b>            #1: TP-237, incorrect prompts, to be incorporated in next procedure update, SPR634            #2: TP-237, missing step, to be incorporated in next procedure update            #3: TP-237, "End ts" missing in procedure (between steps 32 &amp; 33), to be incorporated in next procedure update</p>	



Reference	Results	Remarks
	<p>#4: TP-237, restore all sections on SAS SCOE            # 1: TP-226, TP-217, TP-204, test sequence            # 2: TP-226, Errors in procedure, to be incorporated in next procedure update            # 3: TP-226, repeat some of the steps to gather further information            # 4: TP-226, to fully verify Peak-up commanding            # 2: TP-217, repeat of test requested by SPIRE            # 3: TP-217, skip section in procedure            # 4: TP-217, test performed already on primary -&gt; skip            # 5: TP-217, add manual cooler recycle</p> <p><b>2.1.2 Review of Results</b></p> <p>Peak-up test:            Problems with negative sign (2 complement should have been used in the procedure)            Test failed on primary side and was successful after correction on redundant side.</p> <p>CFT:            All data (Science, HK, CCU) were not available on the database during the SMEC test. These data need to be retrieved from CCS and send to SPIRE. The time frame will be provided by SPIRE (from start of test till 9:00 h UTC).</p> <p>SPT:            BSM control loop setting in real time is very difficult and needs to be repeated during SPT.</p> <p>Detector checks and respective load curves were all successful.</p> <p>Sorption cooler test:            This test was done to check the possibility to perform a SPIRE SPT in vertical S/C orientation with a</p>	<p>NCR to be raised            Action #1 ASED</p>



Reference	Results	Remarks
	<p>not filled He tank. This test result are not conclusive because the convection is coupling the warm pump to the evaporator and warm up the 2 K interface. It is not recommended to perform the SPT in this configuration (60% filled) – if absolutely needed, pre-test in tilted configuration needed.</p> <p>This was a first full functional test after vibration. No anomalies were seen. SPIRE is fully operational for 1.9 K operation.</p> <p><b>2.2 Test Objectives Achieved:</b></p> <p>The test objectives w.r.t. S/C commissioning have been achieved.</p> <p><b>3. Test Reports</b></p> <p>As run procedures are available and will be put on ftp.        Test reports to be issued within 1 month.</p> <p><b>4. NCR / RFW Status</b>        NCR´s raised during the test:</p> <p><b>ASED-NC-4390</b> : SPIRE IST Peak-up commands not accepted by ACMS, can be closed since the format has been corrected and verified on the secondary side</p> <p><b>ASED-NC-4393</b> : Unknown 8,6 Packet from ACMS when executing AC082109 (Peak-up)</p> <p><b>ASED-NC-4394</b> : parameter SM014500 - SPIRE MIB – sign to be corrected (x-, y-rotation?), SPIRE data base to be corrected</p>	<p>Action #2 SPIRE</p>



Reference	Results	Remarks
	<p>New NCR to be raised for SPIRE data loss at test start.</p> <p><b>ASED-NCR-3965:</b> NCR reopened, SAS SCOE working correctly, but TLM reported back to the CCS is corrupted</p> <p>The following NCR's can be closed:  <b>ASED-NCR-4287:</b> can be closed, since validated during the test  <b>ASED-NCR-4355:</b> work around has been implemented, NC did not re-occur, can be closed</p> <p><b>SPR:</b> Problem with the script for cooler recycling (see AIT log sheet, time: 20:27 h)</p> <p><b>4.4 RFW</b></p> <p>None Applicable</p> <p><b>5. Open Work / Open Actions</b></p> <ul style="list-style-type: none"> <li>• The communication between I-EGSE and checkout room was not good (interruptions, cmd's needed to be repeated many times). This system needs to be improved for the next tests.</li> <li>• Power outlets to be in increased in the IEGSE room by extensions.</li> </ul> <p><b>6. AOB</b></p> <p>none</p>	<p>Action #3 ASED</p> <p>SPR to be raised Action #4 ASED</p> <p>Action #5 on AIT</p>





Doc.-No.: HP-2-ASED-MN-1593  
Date: 1.08.08  
Page: 9

Reference	Results	Remarks
	<p data-bbox="365 392 577 419"><b>7. Conclusion</b></p> <p data-bbox="365 491 1435 518">The test has been successfully completed; BSM test to be repeated in SPT.</p>	



### Action Items List

No.:	Description:	Due Date	Originator Comp./Pers.	Actionee Comp./Pers.	Source	Completion
AI/1	Missing data to be retrieved from CCS and to be provided to RAL	8.08.08	RAL	ASED	CCS	
AI/2	parameter SM014500 - SPIRE MIB – sign to be corrected (x-, y-rotation?), SPIRE data base to be corrected	15.08.08	ASED	RAL		
AI/3	New NCR to be raised for SPIRE data loss at test start.	8.08.08	TAS-F	ASED		
AI/4	Problem with the script for cooler recycling (see AIT log sheet, time: 20:27 h)	8.08.08	TAS-F	ASED		
AI/5	Power outlets to be in increased in the IEGSE room by extensions	8.08.08	TAS-F	ASED		

	Name	Dep./Comp.		Name	Dep./Comp.
	Baldock Richard	FAE12		Sonn Nico	ASG51
	Barlage Bernhard	AED13		Steininger Eric	AED321
	Bayer Thomas	ASA42	X	Stritter Rene	AED11
	Brune Holger	ASA45		Suess Rudi	OTN/ASA44
	Chen Bing	HE Space	X	Theunissen Martijn	DSSA
	Davis William	Captec		Vascotto Riccardo	HE Space
	Edelhoff Dirk	AED21		Wagner Klaus	ASG23
	Fehringer Alexander	ASG15		Wietbrock Walter	AET12
	Fricke Wolfgang Dr.	AED 65		Wöhler Hans	ASG23
	Geiger Hermann	ASA42		Wössner Ulrich	ASE252
	Grasl Andreas	OTN/ASA44		Zumstein Armin	AED15
	Grasshoff Brigitte	AET12			
X	Hamer Simon	Terma			
	Hanka, Erhard	FI522			
	Hendrikse Jeffrey	HE Space			
X	Hendry David	Terma			
	Hengstler Reinhold	ASA42			
	Hinger Jürgen	ASG23			
	Hohn Rüdiger	AED65			
	Hopfgarten Michael	AET32			
	Huber Johann	ASA42			
	Hund Walter	ASE252			
X	Idler Siegmund	AED312			
	Ivány von András	FAE12			
	Jahn Gerd Dr.	ASG23			
	Jolk Matthias	AET1		ESA/ESTEC	ESA
	Klenke Uwe	ASG72	X	Thales Alenia Space Cannes	TAS-F
	Kölle Markus	ASA43		Thales Alenia Space Torino	TAS-I
	König Werner	AET32			
X	Koppe Axel	AED312			
	Kroecker Jürgen	AED65		<b>Instruments:</b>	
	La Gioia Valentina	Terma		MPE (PACS)	MPE
	Lang Jürgen	ASE252	X	RAL (SPIRE)	RAL
	Langenstein Rolf	AED15		SRON (HIFI)	SRON
	Langfermann Michael	ASA41			
	Leitermann Stefan	AET12			
	Liberatore Danilo	Rhea		<b>Subcontractors:</b>	
	Martin Olivier	Altec		Austrian Aerospace	AAE
	Maukisch Jan	ASA43		Austrian Aerospace	AAEM
	Much Christoph	ASA43		BOC Edwards	BOCE
	Müller Martin	ASA43		Dutch Space Solar Arrays	DSSA
	Pietroboni Karin	AED65		EADS Astrium Sub-Subsyst. & Equipment	ASSE
	Reichle Konrad	ASA42		EADS CASA Espacio	CASA
	Runge Axel	OTN/ASA44		EADS CASA Espacio	ECAS
	Saal Christoph	External		European Test Services	ETS
	Schink Dietmar	AED321		Patria New Technologies Oy	PANT
	Schmidt Thomas	AED15		SENER Ingenieria SA	SEN
	Schweickert Gunn	ASG23		Thales Alenia Space, Antwerp	TAS-ETCA